

## **REMARKS**

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Office Action dated April 30, 2008. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

### **Interview Summary**

During the interview on May 27, 2008, Applicants' representative explained the concept of the present invention and pointed out its distinguishing features, and explained how the prior art, specifically the Miller reference, was very different in its structure and operation. In particular, Applicants' representative argued that the present invention effectively, generated a network illustrating the relationship between terms across first and second queries. Miller, on the other hand, based on its own examples, was in effect several separate queries each of which had its own set of terms associated with it. Each query was in actuality a conclusion or hypothesis. The graphical representation of Miller simply showed the degree to which each of the terms was considered within the query in order to reach the associated conclusion or hypothesis.

The Examiner in turn noted that she understood how the present invention in general was distinguishable from the prior art, but that claim 1 did not recite the features specifically enough so as to avoid the broad interpretation she is allowed to give the claim in comparing at least claim 1 to the prior art. She suggested that Applicants' representative further amend claim 1 to more clearly recite the features of the present invention, so that she can consider such amendments in a formal response.

With respect to the formal rejection against claim 12, Applicants' representative pointed out how Figure 8 supports the amendment of claim 12. The Examiner requested that Applicants' representative point this issue out in our formal response.

Applicants respectfully thank the Examiner for her consideration in conducting the above-discussed telephone interviews with the Applicants' representative.

### **Status of the Claims**

As outlined above, claims 1-17 stand for consideration in this application, wherein claims 1, 12 and 16 are being amended to more particularly point out and distinctly claim the

subject invention. All amendments to the application are fully supported therein. Applicants hereby submit that no new matter or new issue is being introduced into the application through the submission of this response.

#### Formal Rejections

Claims 12 was rejected under 35 U.S.C. §112, first paragraph, for failing to comply with the written description requirement, and claim 12 was rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The claims are being amended as required by the Examiner.

Specifically, regarding claim 12, the amendments made therein are supported throughout page 17, line 8 to page 20, line 4, as claim 12 maybe related to Figure 8, wherein the term “UPPERTERMS (CONCEPTS)” is illustrated; and more specifically on page 19, line 17 to page 20, line 4, that explains the use of the term “upper concept (term)” in the operation of the present invention. As illustrated in Figure 8, the left column lists terms related to the information and relationships being sought, while the right column lists upper concept terms to which the terms in the left column relate. As shown in Figures 9 and 10, several terms in the left column may relate to the same upper concept term from the right column. Based on the disclosure set forth in the specification as discussed above, Applicants will submit that support for the recitation of claim 12 may be found in the disclosure of the present invention. Withdrawal of the above formal rejections is respectfully requested.

#### Prior Art Rejections

Claims 1-5, 7-9, 11 and 16-17 were rejected under 35 U.S.C. §102(b) as being anticipated by Miller et al. (US Publication No. 2002/0091678). Further, under 35 U.S.C. §103(a), claim 10 was rejected as being unpatentable over Miller ‘678 in view of Murray et al. (US Patent No. 6,876,930); and claims 6 and 12-15 as being unpatentable over Miller ‘678 in view of Chamberlin et al. (US Patent No. 6,941,317). Applicants respectfully traverse this rejection for the reasons set forth below.

Claim 1 as amended recites that a network drawing system comprises: a first input unit designating a first query having terms belonging to a first category; a second input unit designating a second query having terms belonging to a second category; a data storage device storing terms belonging to a third category in a form of a table, the terms of the third category comprising at least terms from the first category and the second category, the table including a degree of association of a relationship between the terms of the third category; a

calculation device which calculates a relationship between the input first query and second query based on the relationship between a plurality of the terms in the table stored in the data storage device that are also associated with at least one of the first query and the second query; and a display device displaying on a screen the plurality of the terms associated with at least one of the first query and the second query as a network connecting the plurality of terms to each other based on a result of calculation made by the calculation device.

Claim 16 is directed to a network drawing method, comprising the steps of: inputting a first query having terms belonging to a first category into a first input unit; inputting a second query having terms belonging to a second category into a second input unit; using a data storage device storing terms belonging to a third category in a form of a table, the terms of the third category comprising at least terms from the first category and the second category, the table including a degree of association of a relationship between the terms of the third category; calculating a relationship between the input first query and second query based on the relationship between a plurality of the terms in the table stored in the data storage device that are also associated with at least one of the first query and the second query; and displaying on a display device the plurality of the terms associated with at least one of the first query and the second query as a network connecting the plurality of terms to each other according to a result of calculating the relationship.

In the system and method of the present invention, a data storage device stores degrees of association of relationships between terms belonging to a third category as a table. A degree of association of relationship between terms indicates how strongly the terms are associated with each other. The terms of the third category comprise terms from the first category and the second category which belong to designated first and second queries, respectively. A calculation device calculates a degree of association of a relationship between the first term and second term through a plurality of terms belonging to the third category using the table. Here, the plurality of terms are corresponded in a chain of association, for example, the first query<=>terms A<=>term B<=>the second query, and the strength of the association of the first query and the second query is calculated based on the corresponding relationships as follows the first query<=>terms A, terms A<=>term B, terms B<=>the second query. The calculation method is described on page 5 of the present specification. A display device displays a network of terms connecting the first query and second query through the plurality of terms based on a result of the association made by the calculation device. Thereby, a term relationship existing between the first query and the

second query can be found. Consequently, it is easy to find an association degree between terms, which may not at first be considered to be associated with each other.

Miller '678 was cited for showing all the features of the present invention as claimed. Applicants will contend that the concept of a "plurality of terms" as expressed in Miller '678 is substantially different from 'a chain of the plurality of terms' in the present invention. In particular, the plurality of terms in Miller '678 refers to terms processed via a single query sequence [query 1 => terms] (see example, "*[0055] In a step S4, the n-dimensional feature vectors of the data objects and the query objects are compared to one another. The step S4 determines relationships between each of the data objects 38 in the database and the query objects 31-36. . . . [0056] In a step S5, the processor 20 projects the relationships calculated in the step S4 to points along the query rays as seen in FIG. 3. The plurality points along each query ray corresponds to the elements 38.*").

The present invention, on the other hand, defines the plurality of terms in the present invention are terms A and terms B processed via a sequence involving plural queries [query 1 => terms A => terms B => query 2]. The choice of terms A and terms B is based on the whole calculation of the sequence of query 1 => terms A => terms B => query 2.

In contrast again, Miller '678 just considers [query 1 => terms], and does not consider the whole sequence of terms in making a network as in the present invention (see "*[0043] FIG. 4 is a graphical representation of exemplary search results in visual representation 18 depicted using the digital computer following specification of a relevance threshold 52 in response to user input, in accordance with an embodiment of the present invention. The processor 20 (FIG. 2) is configured to display the rays 41-46 corresponding to user-input query objects 31-36 and to determine relative relationships between the points 38 distributed along the rays 41-46 and data stored in the database and to then represent a subset of the data having relevance to the query objects as points 38 distributed along the vectors 41-46 within the relevance threshold 52. In one embodiment, the relevance threshold 52 is represented by a circle or other geometric shape formed about the common origin 37.*"). Therefore, Miller '678 cannot and does not show every element recited in claim 1. Accordingly, claim 1 cannot be anticipated by Miller '678.

In particular, the present invention effectively, generates a network illustrating the relationship between terms across first and second queries. Miller, on the other hand, based on its own examples, is in effect several separate queries each of which had its own set of terms associated with it. Each query was in actuality a conclusion or hypothesis. The

graphical representation of Miller '678 simply shows the degree to which each of the terms was considered within the query in order to reach the associated conclusion or hypothesis. Specifically, Miller '678 shows plural query objects or inquiries 31-38 that represent an information object to be compared to objects in a database (see paragraphs [0030] and [0032]). Each query 31-38 thus represents a result or hypothesis to be reached by plural data objects 38 (see paragraphs [0033] and [0041]; "*Fig. 3 might represent a method for exploring how six different people's viewpoints relate to the information in the database.*") . The relationship or position of data objects 38 along the vectors 41-46 corresponds to how relevant a single data object 38 is to the queries 31-36, respectively. Because each query 31-36 is different and separate from any other query, the same data object 38 may have a different degree of relevance to different queries (see paragraphs [0037] and [0043]). Miller '678 is not concerned with combining any of the queries 31-36 to form another query, nor with combining any data objects 38 relevant to one query with data objects of another query in order to form another new query.

Miller '678 by itself fails to show or suggest the combination of a first input unit designating a first query having terms belonging to a first category; a second input unit designating a second query having terms belonging to a second category; a data storage device storing terms belonging to a third category in a form of a table, the terms of the third category comprising at least terms from the first category and the second category, the table including a degree of association of a relationship between the terms of the third category; a calculation device which calculates a relationship between the input first query and second query based on the relationship between a plurality of the terms in the table stored in the data storage device that are also associated with at least one of the first query and the second query; and a display device displaying on a screen the plurality of the terms associated with at least one of the first query and the second query as a network connecting the plurality of terms to each other based on a result of calculation made by the calculation device, as recited in claim 1.

Miller '678 by itself also fails to show or suggest a combination of steps that include: inputting a first query having terms belonging to a first category into a first input unit; inputting a second query having terms belonging to a second category into a second input unit; using a data storage device storing terms belonging to a third category in a form of a table, the terms of the third category comprising at least terms from the first category and the second category, the table including a degree of association of a relationship between the

terms of the third category; calculating a relationship between the input first query and second query based on the relationship between a plurality of the terms in the table stored in the data storage device that are also associated with at least one of the first query and the second query; and displaying on a display device the plurality of the terms associated with at least one of the first query and the second query as a network connecting the plurality of terms to each other according to a result of calculating the relationship, as recited in claim 16.

Thus, Miller '678 can neither anticipate nor render obvious each and every feature of the present invention as claimed.

Regarding the secondary references of Murray '930 and Chamberlin '317, these references were only cited for showing features recited in dependent claims. Even if these references were combined with Miller '678, neither reference provides any disclosure, teaching or suggestion that makes up for the deficiencies in Miller '678, such that their combinations would still fall short of rendering each and every feature of the present invention as claimed.

In other words, the combination of all three references would still fail to show or suggest the combination of elements recited in claim 1, and that combination of all three references would still fail to show or suggest the combination of steps recited in claim 16. As such, the present invention, as recited in at least claims 1 and 16, is distinguishable from Miller '678, Murray '930 and Chamberlin '317. In other words, the present invention as claimed cannot be rendered obvious by Miller '678 in view of either or both Murray '930 and Chamberlin '317. The present invention is distinguishable and thereby allowable over the prior art of record.

### Conclusion

In view of all the above, Applicants respectfully submit that certain clear and distinct differences as discussed exist between the present invention as now claimed and the prior art references upon which the rejections in the Office Action rely. These differences are more than sufficient that the present invention as now claimed would not have been anticipated nor rendered obvious given the prior art. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to

contact the Applicant's undersigned representative at the address and phone number indicated below.

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**September 2, 2008**

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